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| **Common Core State Standard(s):**  **6.NS.4** Find the greatest common factor of two whole numbers less than or equal to 100 and the least common multiple of two whole numbers less than or equal to 12. Use the distributive property to express a sum of two whole numbers 1-100 with a common factor as a multiple of a sum of two whole numbers with no common factor. | **Instructional Resources:**   * **I can statements** * **Making Rectangles to Identify Factors** * **Prime and Composite Numbers** * **Tax Collector** * **Factor Trail Game** * **Factor Game Questions** * **Abundant, Deficient, Perfect** * **Factor Pairs** |
| **Mathematical Practice Standard(s):**  **MP.4** Model with mathematics. | **Warm-up:**   * Review the "**I Can Statement**" handout with the students. Allow them to rank their level of knowledge of the unit. This is the information that they will be learning in this unit. * Ask the following:  1. Does anyone know what a prime number is? 2. How about a composite number? 3. What is a factor? 4. If I have the number 6, what are the factors? 5. What strategies can you use to find the factors of a number?  * Explain to students that this is what they will be working on for the next couple of days |
| **Learner Objective:**  As a result in learning, students should be able to … distinguish between prime and composite numbers and list the factors of a given number. |
| **Instruction:**  **Day 11:**  Instruction   * Use **Making Rectangles to Identify Factors** activity to show all of the different factors of a number by using the grid provided. You can also have the students use unifix cubes to model the different factors of the number and then they can record it on their worksheet. * Discuss the different methods for finding factors of a number, which is the second part of **Making Rectangles to Identify Factors** activity. (Factor Rainbow and Factor T-Chart).   Independent Practice   * Students continue working on methods of listing factors of a number practice section using a method of their choice. This practice can be found on the **Making Rectangles to Identify Factors** activity. * Students will work to find the prime and composite numbers from 1-100 (**prime and composite numbers**). Pass out hundreds charts and students will work in pairs to place color tiles on all the prime numbers from 1-100. * Factor Poster Activity: Each student is given a number and he or she will need to make a poster (the size of a large sheet of construction paper) listing all of the numbers' factors using the 3 methods learned today: factor rainbow, factor t-chart, and factor rectangles. The student also needs to state if the number is prime or composite. | |
| **Comment / Notes:**  Additional Resources:  **Re-teaching**   * Pull small groups of students who are struggling with the identification of prime and composite numbers. * Website for extra practice of identifying prime and composite numbers: <http://www.aaamath.com/g57-prime-or-composite.html>   **Enrichment**   * **Tax Collector** * Factor Trail Game taken from illuminations: <http://illuminations.nctm.org/LessonDetail.aspx?id=L719> * Factor Game: Student can play the factor game using either the interactive applet or the factor game 30 chart. The directions and applet can be found by linking to <http://illuminations.nctm.org/LessonDetail.aspx?id=L620> Have the students work on the questions related to the game (factor game questions).   Abundant, Deficient, Perfect: Talk to the students about abundant, deficient and perfect numbers. This link has an explanation with some practice problems. <http://illuminations.nctm.org/Lessons/FactorTrail/FactorTrail-AS-AbunDefPerf.pdf>   * Factorize: using arrays to find factors: <http://illuminations.nctm.org/ActivityDetail.aspx?ID=64> | |